

WHAT IS CLAIMED IS:

1 1. A computer-implement method of accessing a portion of recorded
2 information using a paper document, the method comprising:
3 receiving information indicative of selection of one or more identifiers from a
4 first set of identifiers printed on the paper document;
5 determining one or more time ranges based upon the one or more identifiers,
6 each time range having a start time and an end time; and
7 determining portions of the recorded information corresponding to the one or
8 more time ranges, wherein a portion of recorded information corresponding to a time range
9 comprises information from the recorded information occurring between the start time and
10 end time associated with the time range.

1 2. The method of claim 1 wherein:
2 the recorded information comprises information of a first type and information
3 of a second type;
4 the one or more time ranges includes a first time range; and
5 determining portions of the recorded information comprises determining at
6 least one of information of the first type and information of the second type from the recorded
7 information occurring between the start time and end time associated with the first time
8 range.

1 3. The method of claim 2 wherein the information of the first type is
2 video information and the information of the second type is at least one of audio information
3 and closed-caption text information.

1 4. The method of claim 1 wherein:
2 the one or more identifiers selected from the first set of identifiers comprise a
3 first identifier;
4 determining the one or more time ranges based upon the one or more
5 identifiers comprises determining a first time and a second time associated with the first
6 identifier; and
7 determining the portions of the recorded information corresponding to the one
8 or more time ranges comprises determining a portion of the recorded information occurring
9 between the first time and second time associated with the first identifier.

1 5. The method of claim 1 wherein:
2 the one or more identifiers selected from the first set of identifiers comprise a
3 first identifier and a second identifier;
4 determining the one or more time ranges based upon the one or more
5 identifiers comprises:
6 determining a time associated with the first identifier; and
7 determining a time associated with the second identifier;
8 determining the portions of the recorded information corresponding to the one
9 or more time ranges comprises determining a portion of the recorded information occurring
10 between the time associated with the first identifier and the time associated with the second
11 identifier.

1 6. The method of claim 5 wherein the first identifier is selected after the
2 second identifier.

1 7. The method of claim 5 wherein the first identifier is selected before the
2 second identifier.

1 8. The method of claim 1 wherein:
2 the one or more identifiers selected from the first set of identifiers comprise a
3 first identifier;
4 determining the one or more time ranges based upon the one or more
5 identifiers comprises:
6 determining a time associated with the first identifier;
7 determining a first time range based upon the first identifier, wherein a
8 start time of the first time range is determined by subtracting a first amount of time from the
9 time associated with the first identifier and an end time of the first time range is determined
10 by adding a second amount of time to the time associated with the first identifier; and
11 determining the portions of the recorded information corresponding to the one
12 or more time ranges comprises determining a first portion of the recorded information
13 corresponding to the first time range, wherein the first portion occurs between the start time
14 and end time associated with the first time range.

1 9. The method of claim 8 wherein the first amount of time and the second
2 amount of time are user-configurable.

1 10. The method of claim 1 wherein:
2 the identifiers in the first set of identifiers are barcodes; and
3 receiving information indicative of selection of the one or more identifiers
4 from the first set of identifiers comprises reading at least one barcode from the paper
5 document using a barcode reader.

1 11. The method of claim 1 further comprising:
2 receiving information indicative of selection of one or more identifiers from a
3 second set of identifiers printed on the paper document;
4 determining one or more operations based upon the one or more identifiers
5 selected from the second set of identifiers; and
6 performing at least one operation from the one or more operations on a portion
7 of the recorded information corresponding to at least one time range from the one or more
8 time ranges.

1 12. The method of claim 11 wherein performing the at least one operation
2 comprises outputting the portion of the recorded information corresponding to the at least one
3 time range from the one or more time ranges.

1 13. The method of claim 11 wherein performing the at least one operation
2 comprises communicating the portion of the recorded information corresponding to the at
3 least one time range to a recipient.

1 14. The method of claim 13 wherein communicating the portion of the
2 recorded information corresponding to the at least one time range to the recipient comprises
3 communicating the portion of the recorded information via an electronic mail addressed to
4 the recipient.

1 15. The method of claim 13 wherein communicating the portion of the
2 recorded information corresponding to the at least one time range to the recipient comprises
3 communicating the portion of the recorded information via facsimile.

1 16. The method of claim 11 wherein performing the at least one operation
2 comprises deleting the portion of the recorded information corresponding to the at least one
3 time range from the recorded information.

1 17. The method of claim 11 wherein performing the at least one operation
2 comprises printing a representation of the portion of the recorded information corresponding
3 to the at least one time range on a paper medium to generate a second paper document.

1 18. The method of claim 11 wherein performing the at least one operation
2 comprises storing the portion of the recorded information corresponding to the at least one
3 time range.

1 19. The method of claim 1 further comprising:
2 receiving information indicative of selection of one or more identifiers from a
3 second set of identifiers printed on the paper document;
4 determining one or more operations based upon the one or more identifiers
5 from the second set of identifiers; and
6 performing at least one operation from the one or more operations on portions
7 of the recorded information corresponding to the one or more time ranges.

1 20. The method of claim 19 wherein performing the at least one operation
2 comprises ranking the one or more time ranges based upon contents of the portions of the
3 recorded information corresponding to the one or more time ranges.

1 21. The method of claim 20 wherein ranking the one or more time ranges
2 comprises:
3 for each time range in the one or more time ranges, determining relevance of
4 the portion of the recorded information corresponding to the time range to a user-specified
5 criterion; and
6 ranking the one or more time ranges based upon the relevance of the portions
7 of the recorded information corresponding to the time ranges to the user-specified criterion.

1 22. The method of claim 21 wherein the user-specified criterion identifies
2 a topic of interest.

1 23. The method of claim 19 wherein performing the at least one operation
2 comprises grouping the one or more time ranges into one or more groups based upon contents
3 of the portions of the recorded information corresponding to the one or more time ranges.

1 24. A system comprising:

2 at least one processor;
3 a memory operatively coupled to the processor, the memory storing program
4 instructions that when executed by the processor, cause the processor to: receive information
5 indicative of selection of one or more identifiers from a first set of identifiers printed on the
6 paper document, determine one or more time ranges based upon the one or more identifiers,
7 each time range having a start time and an end time, and determine portions of the recorded
8 information corresponding to the one or more time ranges, wherein a portion of recorded
9 information corresponding to a time range comprises information from the recorded
10 information occurring between the start time and end time associated with the time range.

1 25. The system of claim 24 wherein:
2 the recorded information comprises information of a first type and information
3 of a second type;
4 the one or more time ranges includes a first time range; and
5 the program instructions when executed by the processor, cause the processor
6 to determine at least one of information of the first type and information of the second type
7 from the recorded information occurring between the start time and end time associated with
8 the first time range.

1 26. The system of claim 25 wherein the information of the first type is
2 video information and the information of the second type is at least one of audio information
3 and closed-caption text information.

1 27. The system of claim 24 wherein:
2 the one or more identifiers selected from the first set of identifiers comprise a
3 first identifier; and
4 the program instructions when executed by the processor, cause the processor
5 to: determine a first time and a second time associated with the first identifier, and determine
6 a portion of the recorded information occurring between the first time and second time
7 associated with the first identifier.

1 28. The system of claim 24 wherein:
2 the one or more identifiers selected from the first set of identifiers comprise a
3 first identifier and a second identifier; and

4 the program instructions when executed by the processor, cause the processor
5 to: determine a time associated with the first identifier, determining a time associated with the
6 second identifier, and determine a portion of the recorded information occurring between the
7 time associated with the first identifier and the time associated with the second identifier.

1 29. The system of claim 28 wherein the first identifier is selected after the
2 second identifier.

1 30. The system of claim 28 wherein the first identifier is selected before
2 the second identifier.

1 31. The system of claim 24 wherein:
2 the one or more identifiers selected from the first set of identifiers comprise a
3 first identifier;
4 the program instructions when executed by the processor, cause the processor
5 to: determine a time associated with the first identifier, determine a first time range based
6 upon the first identifier, wherein a start time of the first time range is determined by
7 subtracting a first amount of time from the time associated with the first identifier and an end
8 time of the first time range is determined by adding a second amount of time to the time
9 associated with the first identifier, and determine a first portion of the recorded information
10 corresponding to the first time range, wherein the first portion occurs between the start time
11 and end time associated with the first time range.

1 32. The system of claim 31 wherein the first amount of time and the
2 second amount of time are user-configurable.

1 33. The system of claim 24 further comprising:
2 a barcode reader configured to read the one or more identifiers from the first
3 set of identifiers from the paper document.

1 34. The system of claim 24 wherein the program instructions when
2 executed by the processor, cause the processor to: receive information indicative of selection
3 of one or more identifiers from a second set of identifiers printed on the paper document,
4 determine one or more operations based upon the one or more identifiers selected from the
5 second set of identifiers, and perform at least one operation from the one or more operations

6 on a portion of the recorded information corresponding to at least one time range from the
7 one or more time ranges.

1 35. The system of claim 34 wherein the program instructions when
2 executed by the processor, cause the processor to output the portion of the recorded
3 information corresponding to the at least one time range from the one or more time ranges.

1 36. The system of claim 34 wherein the program instructions when
2 executed by the processor, cause the processor to communicate the portion of the recorded
3 information corresponding to the at least one time range to a recipient.

1 37. The system of claim 36 wherein the program instructions when
2 executed by the processor, cause the processor to send the portion of the recorded
3 information to the recipient via an electronic mail.

1 38. The system of claim 36 wherein the program instructions when
2 executed by the processor, cause the processor to communicate the portion of the recorded
3 information via facsimile.

1 39. The system of claim 34 wherein the program instructions when
2 executed by the processor, cause the processor to delete the portion of the recorded
3 information corresponding to the at least one time range from the recorded information.

1 40. The system of claim 34 wherein the program instructions when
2 executed by the processor, cause the processor to print a representation of the portion of the
3 recorded information corresponding to the at least one time range on a paper medium to
4 generate a second paper document.

1 41. The system of claim 34 wherein the program instructions when
2 executed by the processor, cause the processor to store the portion of the recorded
3 information corresponding to the at least one time range.

1 42. The system of claim 24 wherein the program instructions when
2 executed by the processor, cause the processor to: receive information indicative of selection
3 of one or more identifiers from a second set of identifiers printed on the paper document,
4 determine one or more operations based upon the one or more identifiers from the second set

5 of identifiers, and perform at least one operation from the one or more operations on portions
6 of the recorded information corresponding to the one or more time ranges.

1 43. The system of claim 42 wherein the program instructions when
2 executed by the processor, cause the processor to rank the one or more time ranges based
3 upon contents of the portions of the recorded information corresponding to the one or more
4 time ranges.

1 44. The system of claim 43 wherein the program instructions when
2 executed by the processor, cause the processor to: for each time range in the one or more time
3 ranges, determine relevance of the portion of the recorded information corresponding to the
4 time range to a user-specified criterion, and rank the one or more time ranges based upon the
5 relevance of the portions of the recorded information corresponding to the time ranges to the
6 user-specified criterion.

1 45. The system of claim 44 wherein the user-specified criterion identifies a
2 topic of interest.

1 46. The system of claim 42 wherein the program instructions when
2 executed by the processor, cause the processor to group the one or more time ranges into one
3 or more groups based upon contents of the portions of the recorded information
4 corresponding to the one or more time ranges.

1 47. A computer program product stored on a computer-readable medium
2 for accessing a portion of recorded information using a paper document, the computer
3 program product comprising:

4 code for receiving information indicative of selection of one or more
5 identifiers from a first set of identifiers printed on the paper document;

6 code for determining one or more time ranges based upon the one or more
7 identifiers, each time range having a start time and an end time; and

8 code for determining portions of the recorded information corresponding to
9 the one or more time ranges, wherein a portion of recorded information corresponding to a
10 time range comprises information from the recorded information occurring between the start
11 time and end time associated with the time range.

1 48. The computer program product of claim 47 wherein:

2 the recorded information comprises information of a first type and information
3 of a second type;
4 the one or more time ranges includes a first time range; and
5 the code for determining portions of the recorded information comprises code
6 for determining at least one of information of the first type and information of the second
7 type from the recorded information occurring between the start time and end time associated
8 with the first time range.

1 49. The computer program product of claim 48 wherein the information of
2 the first type is video information and the information of the second type is at least one of
3 audio information and closed-caption text information.

1 50. The computer program product of claim 47 wherein:
2 the one or more identifiers selected from the first set of identifiers comprise a
3 first identifier;
4 the code for determining the one or more time ranges based upon the one or
5 more identifiers comprises code for determining a first time and a second time associated
6 with the first identifier; and
7 the code for determining the portions of the recorded information
8 corresponding to the one or more time ranges comprises code for determining a portion of the
9 recorded information occurring between the first time and second time associated with the
10 first identifier.

1 51. The computer program product of claim 47 wherein:
2 the one or more identifiers selected from the first set of identifiers comprise a
3 first identifier and a second identifier;
4 the code for determining the one or more time ranges based upon the one or
5 more identifiers comprises:
6 code for determining a time associated with the first identifier; and
7 code for determining a time associated with the second identifier;
8 the code for determining the portions of the recorded information
9 corresponding to the one or more time ranges comprises code for determining a portion of the
10 recorded information occurring between the time associated with the first identifier and the
11 time associated with the second identifier.

1 52. The computer program product of claim 51 wherein the first identifier
2 is selected after the second identifier.

1 53. The computer program product of claim 51 wherein the first identifier
2 is selected before the second identifier.

1 54. The computer program product of claim 47 wherein:
2 the one or more identifiers selected from the first set of identifiers comprise a
3 first identifier;
4 the code for determining the one or more time ranges based upon the one or
5 more identifiers comprises:
6 code for determining a time associated with the first identifier;
7 code for determining a first time range based upon the first identifier,
8 wherein a start time of the first time range is determined by subtracting a first amount of time
9 from the time associated with the first identifier and an end time of the first time range is
10 determined by adding a second amount of time to the time associated with the first identifier;
11 and
12 the code for determining the portions of the recorded information
13 corresponding to the one or more time ranges comprises code for determining a first portion
14 of the recorded information corresponding to the first time range, wherein the first portion
15 occurs between the start time and end time associated with the first time range.

1 55. The computer program product of claim 54 wherein the first amount of
2 time and the second amount of time are user-configurable.

1 56. The computer program product of claim 47 wherein:
2 the identifiers in the first set of identifiers are barcodes; and
3 the code for receiving information indicative of selection of the one or more
4 identifiers from the first set of identifiers comprises code for reading at least one barcode
5 from the paper document using a barcode reader.

1 57. The computer program product of claim 47 further comprising:
2 code for receiving information indicative of selection of one or more
3 identifiers from a second set of identifiers printed on the paper document;

code for determining one or more operations based upon the one or more identifiers selected from the second set of identifiers; and
code for performing at least one operation from the one or more operations on a portion of the recorded information corresponding to at least one time range from the one or more time ranges.

58. The computer program product of claim 57 wherein performing the at least one operation comprises outputting the portion of the recorded information corresponding to the at least one time range from the one or more time ranges.

59. The computer program product of claim 57 wherein the code for performing the at least one operation comprises code for communicating the portion of the recorded information corresponding to the at least one time range to a recipient.

60. The computer program product of claim 59 wherein the code for communicating the portion of the recorded information corresponding to the at least one time range to the recipient comprises code for communicating the portion of the recorded information via an electronic mail addressed to the recipient.

61. The computer program product of claim 59 wherein the code for communicating the portion of the recorded information corresponding to the at least one time range to the recipient comprises code for communicating the portion of the recorded information via facsimile.

62. The computer program product of claim 57 wherein the code for performing the at least one operation comprises code for deleting the portion of the recorded information corresponding to the at least one time range from the recorded information.

63. The computer program product of claim 57 wherein the code for performing the at least one operation comprises code for printing a representation of the portion of the recorded information corresponding to the at least one time range on a paper medium to generate a second paper document.

64. The computer program product of claim 57 wherein the code for performing the at least one operation comprises code for storing the portion of the recorded information corresponding to the at least one time range.

1 65. The computer program product of claim 47 further comprising:
2 code for receiving information indicative of selection of one or more
3 identifiers from a second set of identifiers printed on the paper document;
4 code for determining one or more operations based upon the one or more
5 identifiers from the second set of identifiers; and
6 code for performing at least one operation from the one or more operations on
7 portions of the recorded information corresponding to the one or more time ranges.

1 66. The computer program product of claim 65 wherein the code for
2 performing the at least one operation comprises code for ranking the one or more time ranges
3 based upon contents of the portions of the recorded information corresponding to the one or
4 more time ranges.

1 67. The computer program product of claim 66 wherein the code for
2 ranking the one or more time ranges comprises:
3 code for determining, for each time range in the one or more time ranges,
4 relevance of the portion of the recorded information corresponding to the time range to a
5 user-specified criterion; and
6 code for ranking the one or more time ranges based upon the relevance of the
7 portions of the recorded information corresponding to the time ranges to the user-specified
8 criterion.

1 68. The computer program product of claim 67 wherein the user-specified
2 criterion identifies a topic of interest.

1 69. The computer program product of claim 65 wherein the code for
2 performing the at least one operation comprises code for grouping the one or more time
3 ranges into one or more groups based upon contents of the portions of the recorded
4 information corresponding to the one or more time ranges.